interest. It will be one-millionth the size of the earth; a millimetre on the globe will represent a kilometre on the surface of the earth. The globe will be about 30 metres (nearly 100 feet) in diameter. On this scale it will be possible in most cases to give geographical details their true dimensions; Paris will occupy just about 1 centimetre, and may serve as a unit with which to compare the dimensions of other features. All the great lines of communication by land or by sea can be shown in detail. In the enormous cupola under which the globe will be placed, it will be possible by means of a clock-work arrangement to turn the globe on its axis and convey a precise notion of the diurnal rotation of the earth. A point on the equator will move at the rate of half a millimetre per second. The many educational uses to which such a globe could be put are evident. The globe, we understand, is well advanced towards completion.

IN the most recent number of the *Bulletin de la Société de Géographie*, M. Jules Marcou continues and concludes an account of his investigations into the origin of the name America. He rejects, for very many reasons, which will be found in the contribution in question, the ordinary derivation—that is, from the Christian name of Vespucci, the Italian navigator. Vespucci, he says, never took the name Amerrigo, or Amerigo, till after America was discovered, and, through vanity, he kept up the proud title. The name is an indigenous one, M. Marcou thinks, and means the country of the wind, or the land rich in gold. Four-fifths of the storms which are met with in the Atlantic come from America, and the gold put in circulation by Columbus's discovery explains the second meaning of the term. Between Lake Nicaragua and the Mosquito Coast is a range of mountains called the American Mountains, inhabited by a tribe of Indians, now very few in numbers, who bear the name, "Los Amerriques," and who have been, according to the President of the Nicaraguan Republic, who supports this view, continually in communication with the whole of the Mosquito Coast. Columbus, and not Vespucci, was the discoverer of America, and the country was named from this place and these people, and not from Vespucci, who was a man of no importance, until he either took the name of Amerrigo, or until it was given him.

CAPTAIN CECCHI, Italian Consul at Aden, sends to the *Bollettino* of the Italian Geographical Society some further particulars of Count Teleki's expedition to the north of Masai Land, and his discovery of the two lakes Samburu (Upper and Lower Narok) in that region. The explorer, who was accompanied by Lieut. L. von Höhnel, of the Austrian Navy, after ascending Mount Kenia, reached the Niems territory on November 21, 1887, and was detained there till the following February. On the 10th of that month the party continued their journey in a northerly direction, and on March 6 arrived on the southern shore of the large lake Samburu (Upper Narok), to which Count Teleki gave the name of his intimate friend, the late Crown Prince Rudolph. The much smaller basin of the Lower Narok, which was also re-named Stephania, in honour of the Crown Princess, was reached on April 4, after which the Expedition returned to the coast at Mombasa. At the northernmost point to which they penetrated (nearly 6° N. lat.) they were within about seventy miles of the Kaffa country, and they describe the two rivers flowing thence southward to the northern extremity of Lake Rudolph as "very important streams." This agrees with the results of Sig. Borelli's explorations in the region south of Shoa, and makes it highly probable that one of these two rivers is the Omo (Ghibieh), which in that case would be an affluent, not of the Juba or of the White Nile, but of the inland Samburn basin, lying between those two water-systems. To the same basin belongs Lake Stephania, which communicates with the northern extremity of Lake Rudolph, about lat. 4° 20′ N. The expenses of this important expedition were entirely borne by Count Teleki, who is a wealthy Hungarian nobleman. Captain Cecchi's letter is accompanied by a map of the two new lakes prepared from Lieut. von Höhnel's original sketch.

SIXTH ANNUAL REPORT OF THE FISHERY BOARD FOR SCOTLAND.

THE Report for 1887 is published in three separate parts—a plan which will be found convenient in many ways. Part I. contains the General Report; Part II., Report on Salmon Fisheries; and Part III., the Scientific Investigations. The product of the sea-fisheries of Scotland continues to be very large, but in 1887 the prices of most kinds of fish were much lower than they had been for a great many years previously; the fishermen only received a very small return for their capital and labour, and many of them were reduced to a state of extreme poverty. Of the different fisheries of Scotland, that of the herring continues to be by far the most productive and valuable. The fishing of 1887 was less so than that of 1886, but, owing to the great depression in the herring trade, it was not entered into nor carried on with the spirit and industry of more prosperous times. The summer's catches of herring were, speaking generally, much inferior to those of 1886, but the winter herring fishery was the most productive ever known. With yearly fluctuations, the yield of the herring fishery on the Scottish coast has, since the beginning of the century, gone on increasing in an extraordinary degree. The total quantity of white fish landed and sold for consumption fresh showed a large increase compared with 1886, being the largest landed in any year during which returns have been collected; whilst the shell-fish showed a considerable decrease. The total gross value of the sea-fisheries of Scotland for 1887 was £1,915,602 10*s*. The Board are much impressed with the beneficial results to fishermen and curers arising from increased telegraphic communication, which, when further developed, will be of immense value for the promotion of the fishing industry. It is satisfactory that thirteen new telegraph stations are to be opened in remote districts; also that a number of harbours are being improved or constructed. The marine police and fishery superintendence was carried on by H.M.SS. *Jackal*, *Vigilant*, *Firm*, and *Active*.

The inference from Mr. Young's Report on the oyster and mussel fisheries on the south-west coast of Scotland is that there are many places where the cultivation of these mollusks might be renewed or established, but that, to make this of any permanent use, such nurseries should be the property of someone whose interest it would be to make the concern profitable to the public and himself, of course under proper legislation. In the salmon fisheries, owing to the dryness of the season, the angling was very poor, but the nets, especially those in the tide-ways, were very successful. The total value was £282,523 10*s*.

The third part of the Report, consisting of 400 pages and 17 plates, contains the results of the scientific work. The text is divided into three sections, and is preceded by a general statement, which touches upon the scientific work done in 1887, and draws attention to the matters requiring special attention in the immediate future—viz. (1) how adequate supplies of bait for the line fishermen may be best provided. (2) What measures should be taken to improve certain exhausted fisheries of the shores and in-shore waters, such as mussels, lobsters, oysters, &c., by artificial cultivation, or otherwise. (3) The collection of all possible information bearing upon the influence of different modes of fishing, especially in the territorial waters, and in relation to the destruction of young fish. (4) The study, by means of the *Garland* and otherwise, of the distribution, migrations, and spawning periods of the edible fishes, and of the distribution and movements of the floating organisms which form a large portion of their food. (5) The extension of our knowledge regarding the physical conditions of the fishing-grounds and of the waters around the coast. (6) The collection of special statistics in relation to the fisheries of particular districts. The value and utility of such investigations and inquiries is manifest. It is very desirable that some measures should be taken with the object of providing a plentiful supply of bait for the line fishermen. The condition of certain of the shore fisheries is also a subject of considerable gravity. The oyster, as an article of commerce, is becoming slowly but surely extinct in Scotland, the total value of the yield for 1887 being only £965. The diminution in the numbers and in the size of the lobster has been referred to, and it will be an unfortunate circumstance if, for the want of active steps being taken, this important branch of the Scottish fisheries, now rapidly falling off, is allowed to follow the oyster in the process of practical extinction.

Section A of the appendixes contains the general scientific reports, the longest of which is that on "The Trawling Experiments of the *Garland*, and the Statistics of the East Coast Fisheries," Part 2, by Prof. Cossar Ewart and Sir J. R. G. Maitland, illustrated by three admirable charts, a map showing the chief areas investigated by the *Garland*, and about 130 pages of elaborate and accurate statistical tables. The influence of

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excessive beam-trawling in the in-shore waters has formed the subject of several Parliamentary inquiries; but from want of trustworthy statistics or scientific evidence the conclusions arrived at have not always been in agreement. The result of the *Garland* experiments and the statistics collected shows that in those areas where trawling is prohibited, the fish, especially the flat-fish, have largely increased and the number of young fish is greater than formerly. The results of the *Garland's* investigations as to the distribution of edible fishes, their numerical variations at different seasons, and the proportional abundance of young and adults are also given, and the scientific statistics collected are discussed in detail. It is evident that by the systematic collection of scientific statistics regarding the productiveness of the fisheries and the relative influence of special modes of fishing, the migration, the spawning processes, and the general life-history of the fishes themselves, a great deal will be accomplished for the promotion of the fishery industries of Scotland. In this connection it will be seen that the investigations carried on by the *Garland* are calculated to have a high value, since the data thus collected are wide in their scope, systematic, and trustworthy. Without the use of a vessel specially adapted for the purpose such investigations would be impossible.

Section B contains the biological investigations. The paper on "The Scottish Lobster Fishery," by Prof. Ewart and T. Wemyss Fulton, M.B., discusses at due length the interesting question as to the best means of restoring this fishery to its old place in our seas and in our markets. Slowly but surely lobsters have been diminishing in size and number and rising in price; and our once famous home lobster market has to be supplemented by supplanting foreign supplies, simply because Scotch lobsters cannot be got in sufficient numbers of a marketable size. The older and most valuable lobsters have been cleared out, and the less mature forms are being drawn upon. Unfortunately also, the female lobster being much more valuable for cooking purposes, the "coral" is sometimes collected alone, and so, by the systematic destruction of its ova, the lobster is seriously handicapped in the struggle for existence. The use of "creels" or "pots," instead of the older-fashioned "rings," has been also an important factor in bringing about the "over-fishing." The legislation of lobster-fisheries is a very difficult matter, and in Canada, where the restrictions are very severe, they have failed in their aim. It is impossible to set one fixed close-time all over Scotland, as there is no general agreement among fishermen as to which time would be most serviceable. The institution of a minimum legal size is a regulation generally adopted, and it is proposed that the gauge of 8 inches should be raised to 9 inches. Further, that, as in Norway and the United States, artificial culture should be resorted to. By artificially hatching the eggs and rearing the young through the larval stages till they have reached a certain size, they are protected from their natural enemies, and if then transferred to the sea would be better able to take care of themselves. That the process is feasible has been shown both in Norway and the United States. A complete lobster-hatchery could be established for a comparatively small sum at some suitable point on the west coast. Unless some steps be taken, the lobster fishery of Scotland is likely to become the memory of a pleasant and profitable past. Mr. Thomas Scott gives in interesting detail, a "Revised List of the Crustacea of the Firth of Forth," which records 230 species, including 41 of Ostracoda, 42 of Copepoda, and 13 Schizopods. Of these species many are new to the district, and two Copepods—*Aztrotrogus papillatus* and *Cyclops ewarti*—new to science. This list is a valuable addition to our knowledge of the Crustacean fauna of this region, previously studied by Leslie, Herdman, Henderson, and others. Mr. Scott also supplies notes on the contents of the stomachs of herring and haddock, and on interesting fishes, &c., sent to the University of Edinburgh. The nature of "red cod," a fungoid condition sometimes met with in the preserved fish, is described by Prof. Ewart; Dr. Edington furnishing and figuring the results of a bacteriological investigation as to the nature of the organisms present, and the cause of the red coloration. Red cod was first noticed in America, but has since been observed in various places, including two as far apart as Algiers and the Hebrides. Used as food in this state, the results may be disagreeable or even dangerous. It was generally referred to the presence of a minute Fungus (*Clathrocytis roseo-persicina*), but Dr. Edington ascribes it to a special Bacillus (*Bacillus rubescens*), which also existed in the salt used for curing, and thus infected the fish. Mr. W. L. Hoyle reports on biological investigations in the sea to the west of Lewis during July and August 1887, and gives a list of the various forms obtained. Prof. McIntosh, F.R.S., gives Reports from the Marine Station at St. Andrews. These deal chiefly with the stages of development in several of the food-fishes, and with the Annelids and other forms used as bait. Mr. Calderwood furnishes notes on an intra-uterine specimen of the porbeagle (*Lamna cornubica*); and Mr. J. Murray on the fishing-grounds of the Stonehaven district, of which he is officer. A new and edifying feature of the Report is furnished by Dr. Wemyss Fulton's account of contemporary work relating to the scientific and economic aspects of the fisheries. The contemporary work carried on in England and Ireland, United States, Germany, Norway, Denmark, Holland, Italy, and Japan is also summarized.

Section C, which is devoted to the physical investigations, contains three papers: on the apparatus required for carrying on physical observations in connection with the fisheries, and on a physical and chemical examination of the water in the Moray Firth and the Firths of Inverness, Cromarty, and Dornoch, by Dr. John Gibson and Dr. H. R. Mills, the latter also reporting on the physical observations on the sea to the west of Lewis, taken during the cruise of the *Jackal*, as described previously by Mr. Hoyle. These papers are illustrated by ten graphic plates, with tables, charts, &c.

As may be seen from the foregoing abstract of the Report, the Scottish Fishery Board is doing good and trustworthy work in many directions, and, from a scientific and commercial point of view, it deserves every encouragement from the Government and the public. It would be an important aid if, by interchange of publications, the Board could be kept in touch with the important fishery organizations abroad. Unfortunately, at present the number of copies of the Report placed at the disposal of the Board renders this impossible. This should be remedied speedily, as, from an economical point of view, there should be the freest circulation of knowledge on questions touching such an important industry.

SCIENTIFIC SERIALS.

Revue d'Anthropologie, troisième série, tome iv. (Paris, 1889).—The Hottentots in the Paris Garden of Acclimatization, by M. Deniker. As the group consists of only six men, five women, and two children, the observations and anthropometric measurements made by the author cannot be regarded as contributing any very important facts to general ethnological inquiry. To French readers the subject has, however, the interest of novelty, since it would appear that the physical conformation of these South Africans has not hitherto been often made the subject of careful study among French ethnologists owing to their lack of opportunity for examining the living subject or measuring the cranial remains of the people, since the Museums of France contain scarcely more than thirty skulls in all, including both Hottentots and Bushmen. The observations of M. Deniker agree generally with those of Profs. Flower, Virchow, and Davis; and like them he believes that we must regard the Hottentot as belonging to the dolichocephalic type, while the Bushmen must be included under the mesocephalic group, the cephalic index being, however, nearly the same, 73, for both. The women of the party all presented the well-developed steatopygia, which is generally admitted to be a national characteristic of the sex, this condition being specially marked even in one of the elder women whose body was almost emaciated in all its other parts. A curious abnormality was noted in two of the men, and in one woman, who presented an interdigital membrane between the second and third toes, affecting both feet in one case.—M. S. Reinach in an article on the museum of the Emperor Augustus, whose collection of bones and arms is referred to by Suetonius, points out that owing to inexact interpretations the precise meaning of the writer has gradually been more and more distorted. M. Reinach thinks that we must seek for the site of this so-called museum at Capri, and not on the Roman Palatine, as M. Nadaillac supposes; while he believes that the "*gigantum ossa*" spoken of by Suetonius were fossil bones, popularly characterized as "*arma heroum.*" This opinion, the author thinks, derives support from the story of Samson slaying the Philistines with a jaw-bone; animal bones having been found by primitive peoples to be more readily available as weapons than implements of stone, which required labour for their fabrication. There is no doubt, moreover, from a reference in the Vedic

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